PB 209 673

AIR POLLUTION REPORT

FEDERAL FACILITIES

METROPOLITAN DAYTON INTRASTATE

AIR QUALITY CONTROL REGION

ENVIRONMENTAL PROTECTION AGENCY

Air Pollution Control Office

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The status is presented of the Federally owned facilities within the Metropolitan Dayton Air Quality Control Region with regard to the implementation of the objectives prescribed by the Clean Air Act, as amended. Fuel usage, refuse disposal practices, air pollution emissions and proposed abatement measures for the listed installations are reported.

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DIVISION OF ABATEMENT
AIR POLLUTION CONTROL OFFICE
ROCKVILLE, MARYLAND

JANUARY 1971

TABLE OF CONTENTS

		PAGE
NARRATIVE		1
FIGURE 1.	MAP OF DESIGNATED AIR QUALITY CONTROL REGION	3
TABLE I.	FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES	4
TABLE II.	ANNUAL FUEL USE BY FEDERAL FACILITIES	14
TABLE III.	FEDERAL CONTRIBUTION TO AIR POLLUTION	15
TABLE IV.	FEDERAL POINT SOURCES	16
TABLE V.	COAL-FIRED BOILERS IN VIOLATION OF 42 CFR 76.4	17
TABLE VI.	ABATEMENT PROGRAM FOR FEDERAL PROBLEM AREAS	19
TABLE VII.	POLLUTANT REDUCTION GOALS	21
REFERENCES AND NOTES		22

NARRATIVE

This report presents the current status of the Federally owned facilities within the Metropolitan Dayton Air Quality Control Region with regard to the implementation of the objectives prescribed by the Clean Air Act, as amended. The data in this report are the most recently available and reflect the current fuel usage, refuse disposal practices, air pollution emissions and proposed abatement measures for the listed installations.

I. BOUNDARIES OF THE AIR QUALITY CONTROL REGION

On December 17, 1969, the Metropolitan Dayton Intrastate Air Quality Control Region was designated pursuant to section 107(a) of the Clean Air Act, as amended. The six county intrastate Region is located adjacent to both the Ohio-Indiana State border and the northern boundary of the Cincinnati Air Quality Control Region. It consists of Clark, Darke, Greene, Miami, Montgomery and Preble Counties in the State of Ohio. A map of this Region is presented in Figure 1.

II. NUMBER OF FEDERAL FACILITIES

There are 52 Federal installations within the Region and of these 20 are involved in burning either fossil fuels or refuse. Table I is a listing of these facilities and the quantities of fuel and refuse burned by each. Table II is a summary of the total annual fuel usage for the respective Counties within the Region.

III. FEDERAL CONTRIBUTIONS TO AIR POLLUTION

The Federal facilities within the Metropolitan Dayton Air Quality Control Region emit annually a total of 3000 tons of sulfur oxides (SO_x), 1500 tons of nitrogen oxides (NO_x), 1400 tons of particulate (PART), 350 tons of carbon monoxide (CO) and 210 tons of hydrocarbons (HC). These emissions, as summarized in Table III, contribute slightly less than 2% of the total particulates, carbon monoxide and sulfur oxides from all stationary sources within the area.

Emissions from transportation sources were not included in this report, but will be covered in a subsequent report of air pollution emissions from mobile sources. Identifiable annual aircraft emissions are estimated to total 8600 tons of carbon monoxide, 1700 tons of hydrocarbons, 600 tons of nitrogen oxides and 400 tons of particulates.

Table IV lists the Federal sources which emit annually more than 100 tons per year (Point Sources) of any one pollutant. There are four point sources in this Region - Wright-Patterson Air Force Base

in Fairborn, Gentile Air Force Station and the Veterans Hospital in Dayton and the AEC Mound Laboratory in Miamisburg.

Three installations in the Region, as listed in Table V, have coal-fired boilers in violation of the particulate emissions limitations as per Federal regulation: Title 42, Part 76.4, Sections (7) and (8).

IV. REMEDIAL ABATEMENT MEASURES PROPOSED

Three Federal facilities, listed in Table VI, reported air pollution problems and/or proposed remedial measures in their 1967-1972 five year abatement plans. These actions and the expected reductions in the air pollution emissions produced by these facilities when all of the abatement plans have been put into effect are presented by Table VII.

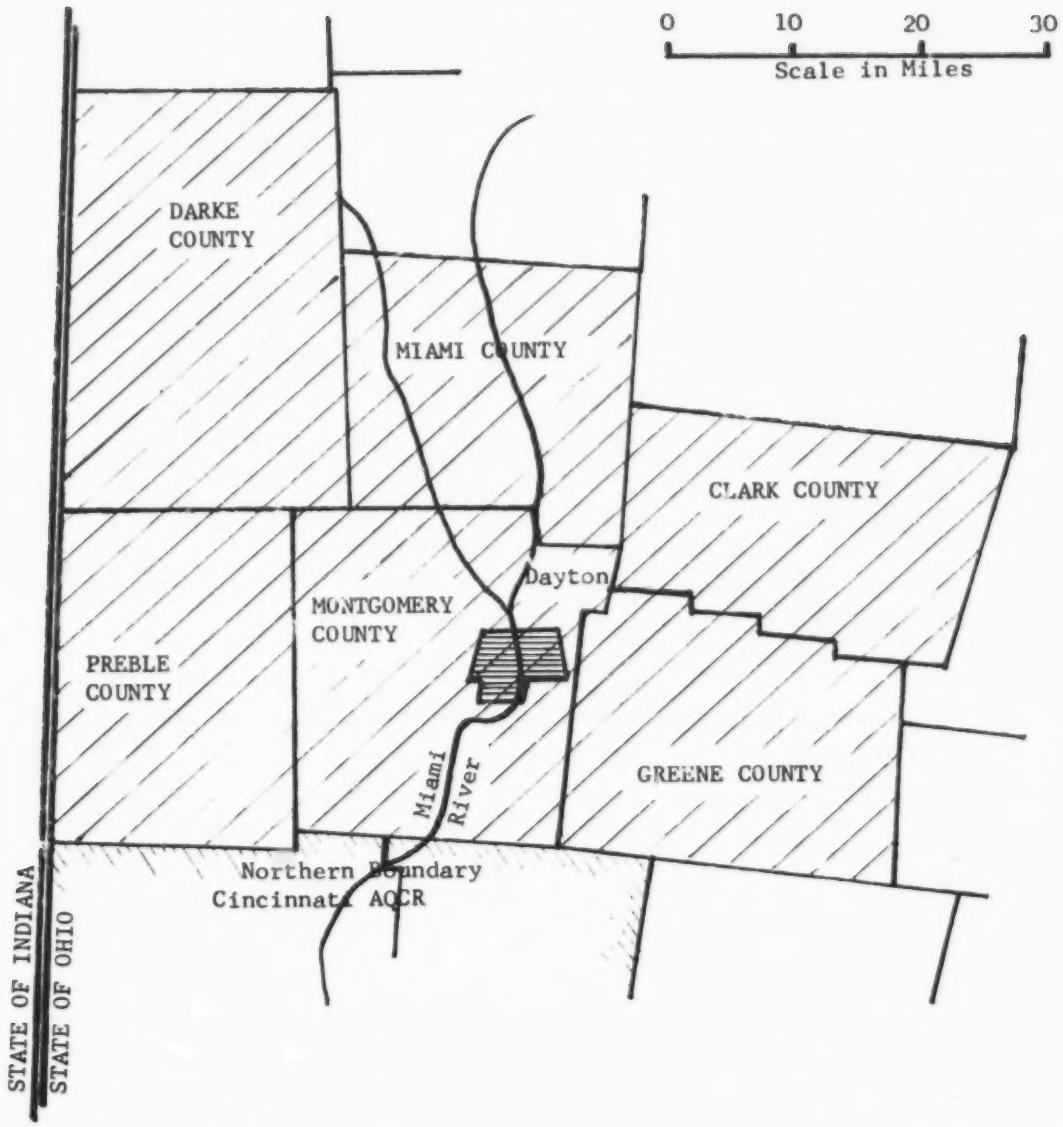

FIGURE 2

METROPOLITAN DAYTON INTRASTATE

AIR QUALITY CONTROL REGION

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
OHIO CLARK DONNELSVILLE							
WRIGHT-PATT AF BASE OM	0	0	0	0	0	0	OUTER MARKER
OHIO CLARK SPRINGFIELD							
ARMY RESERVE CENTER	0	0	2650	0	0	0	NO REFUSE PROBLEMS
URBANA AF TEST SITE	0	0	0	0	0	0	DEACTIVATED JUNE 67
SPRINGFIELD AF TEST SITE	0	0	0	0	0	0	DEACTIVATED
SPRINGFIELD MAP	0	0	0	156,400	0	0	AIR NATIONAL GUARD
POST OFFICE LIMESTONE ST	0	0	0	0	0	0	PURCHASES STEAM

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
FAA H 12670	0	0	0	0	0	0	HOMING BEACON
OHIO DARKE GREENVILLE							
POST OFFICE 101 E MAIN	0	0	1780	0	0	0	REFUSE COLLECTED
OHIO GREENE CEDARVILLE							
AIR FORCE TEST SITE	0	0	0	0	0	0	DEACTIVATED JUNE 67
OHIO GREENE FAIRBORN							
WRIGHT-PATT A F BASE	0	5020	254	1,098,683	0	119094	
WRIGHT-PATT 02 COMMUN EQ	0	0	0	0	0	0	EMERGENCY POWER ONLY

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
WRIGHT-PATT 03 COMMUN EQ	0	0	0	0	0	0	EMERGENCY POWER ONLY
WRIGHT-PATT TEST SITE	0	0	0	0	0	0	EMERGENCY POWER ONLY
POST OFFICE 1 EAST MAIN	0	0	818	0	0	0	REFUSE COLLECTED
FAA ASR 12635	0	0	0	0	0	0	AIRPORT RADAR
OHIO GREENE JAMESTOWN							
AIR FORCE RADAR SITE	0	0	0	0	0	0	EMERGENCY POWER ONLY
OHIO GREENE XENIA							
POST OFFICE EAST MAIN ST	0	0	2179	0	0	0	REFUSE COLLECTED

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
FAA RMLR 12760	0	0	0	0	0	0	RADAR MICRO-WAVE LINK
OHIO GREENE YELLOW SPRGS							
WRIGHT-PATT 04 COMMUN EQ	0	0	0	0	0	0	EMERGENCY POWER ONLY
POST OFFICE CORRY ST	0	0	799	0	0	0	REFUSE COLLECTED
OHIO MIAMI LAURA							
FAA VTAC 12636	0	0	0	0	0	0	RANGE/DIRECT AID
OHIO MIAMI PIQUA							
POST OFFICE WAYNE & HIGH	0	0	1935	0	0	0	REFUSE COLLECTED

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
AEC PIQUA REACTOR	0	0	0	0	0	0	CLOSED
OHIO MIAMI TIPP CITY							
POST OFFICE 29 WEST MAIN	0	0	609	0	0	0	REFUSE COLLECTED
FAA H 12675	0	0	0	0	0	0	HOMING BEACON
OHIO MIAMI TROY							
ARMY RESERVE CENTER	0	0	940	0	0	0	NO REFUSE PROBLEMS
AIR FORCE TEST SITE	0	0	0	0	0	0	EMERGENCY POWER ONLY
POST OFFICE MARKET ST	0	0	1045	0	0	0	REFUSE COLLECTED

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
OHIO MONTGOMERY BROOKVILLE							
FAA RCAG 12606	0	0	0	0	0	0	VHF RADIO EQUIPMENT
OHIO MONTGOMERY DAYTON							
NAVY RESERVE TRAINING CTR	0	0	0	42,000	0	0	REFUSE COLLECTED
ARMY RESERVE CENTER	0	0	0	0	0	0	SPACE HEAT FURNISHED
WRIGHT-PATT 01 COMMUN EQ	0	0	0	0	0	0	EMERGENCY POWER ONLY
GENTILE AIR FORCE STAT	0	0	0	0	0	11,760	OPERATED BY DSA
VA HOSPITAL	0	150	0	0	0	12,000	SMOKE DETECT ON STACKS

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
PO ANNEX	0	0	0	0	0	0	GSA DISPOSED OF PROPERTY
PO & VEHICLE MAIN FAC	0	0	25,530	0	0	0	REFUSE COLLECTED
FEDERAL BLDG COURTHOUSE	0	0	0	0	0	0	PURCHASE STEAM
DMS WAREHOUSE	0	0	0	14,000	0	0	REFUSE COLLECTED
FAA RTR 12605	0	0	0	0	0	0	TRANSMITTER/ RECEIVER
OHIO MONTGOMERY ENGLEWOOD							
FAA OM 12677	0	0	0	0	0	0	OUTER MARKER

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
FAA OH 12679	0	0	0	0	0	0	OUTER MARKER
OHIO MONTGOMERY MIAMISBURG							
POST OFFICE CENTRAL AVE	0	0	652	0	0	0	REFUSE COLLECTED
AEC MOUND LABORATORY	20,000	0	0	0	2,400,000	0	
OHIO MONTGOMERY SULFURGROVE							
SULFURGROVE MTK (AF)	0	0	0	0	0	0	MISSILE STAT TRACKING
OHIO MONTGOMERY VANDALIA							
POST OFFICE MAPLE ST	0	0	766	0	0	0	REFUSE COLLECTED

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
FAA ILS 12676	0	0	0	0	0	0	INSTRUMENT LANDING SYST
FAA MM 12680	0	0	0	0	0	0	MIDDLE MARKER
FAA GS 12681	0	0	0	0	0	0	VERTICAL NAV AID
FAA LOC 12682	0	0	0	0	0	0	HORIZONTAL NAV AID
FAA ALSF 12697	0	0	0	0	0	0	APPROACH LIGHT SYSTEM
OHIO PREBLE EATON							
BIN SITE 99	0	0	0	0	0	0	STORAGE OF GRAIN

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
POST OFFICE WEST MAIN ST	0	0	606	0	0	0	REFUSE COLLECTED

TABLE II

ANNUAL FUEL USE BY FEDERAL FACILITIES

	COAL (TONS)	RESID OIL (GAL)	DIST OIL (GAL)	GAS (MCF)
OHIO				
CLARK	0	0	156,400	2,650
DARKE	0	0	0	1,780
GREENE	119,094	0	1,098,683	4,050
MIAMI	0	0	0	4,529
MONTGOMERY	23,760	2,400,000	56,000	26,948
PREBLE	0	0	0	606
TOTAL	142,854	2,400,000	1,311,083	40,563

TABLE III

FEDERAL CONTRIBUTION TO AIR POLLUTION
(TONS/YEAR)

	SOX	NOX	CO	PART	HC
OHIO					
CLARK	1	1	0	1	0
DARKE	0	0	0	0	0
GREENE	2100	1200	200	1200	160
MIAMI	0	0	0	0	0
MONTGOMERY	910	340	150	230	53
PREBLE	0	0	0	0	0
STATE TOTAL	3000	1500	350	1400	210
AREA TOTAL	3000	1500	350	1400	210

NOTE: (1) EMISSIONS REPORTED IN SIGNIFICANT FIGURES
(2) EMISSIONS LESS THAN 0.5 TONS/YR REPORTED AS ZERO

TABLE IV

FEDERAL POINT SOURCES
(TONS/YEAR)

	SOX	NOX	CO	PART	HC
OHIO					
GREENE					
WRIGHT-PATT A F BASE	2100	1200	200	1200	160
MONTGOMERY					
GENTILE AIR FORCE STAT	450	120	18	94	6
VA HOSPITAL	140	120	18	83	6
AEC MOUND LABORATORY	330	100	110	48	41

NOTE: (1) A POINT SOURCE IS AN INSTALLATION WHICH EMITS OVER 100 TONS/YEAR OF ONE OR MORE OF THE FIVE POLLUTANTS
(2) EMISSIONS REPORTED IN SIGNIFICANT FIGURES

TABLE V

COAL-FIRED BOILERS IN VIOLATION OF 42 CFR 76.4

INSTALLATION NAME	BOILER SIZE (MMBTU/HR)	NUMBER OF BOILERS	COAL USED (TONS/YEAR)	PART. (LBS/MMBTU) EMITTED	PART. (LBS/MMBTU) ALLOWED	PART. EMITTED TONS/YR/BOILER
WRIGHT-PATT A F BASE	60.0	2	5000	1.20	0.45	82.9
WRIGHT-PATT A F BASE	40.0	2	4331	1.20	0.48	71.8
WRIGHT-PATT A F BASE	11.5	1	1152	1.18	0.59	18.7
WRIGHT-PATT A F BASE	100.0	1	8000	0.47	0.41	52.0
WRIGHT-PATT A F BASE	119.6	3	8800	0.47	0.40	57.2
WRIGHT-PATT A F BASE	59.8	2	4438	0.47	0.45	28.8
WRIGHT-PATT A F BASE	5.8	2	100	0.72	0.60	1.0
WRIGHT-PATT A F BASE	4.4	2	100	0.72	0.60	1.0
WRIGHT-PATT A F BASE	100.0	3	9300	1.20	0.41	154.1

TABLE V (Con't)

COAL-FIRED BOILERS IN VIOLATION OF 42 CFR 76.4

INSTALLATION NAME	BOILER SIZE (MMBTU/HR)	NUMBER OF BOILERS	COAL USED (TONS/YEAR)	PART. (LBS/MMBTU) EMITTED	PART. (LBS/MMBTU) ALLOWED	PART. EMITTED TONS/YR/BOILER
GENTILE AIR FURCE STAT	38.5	4	2940	0.52	0.48	23.5
VA HOSPITAL	20.0	2	2000	0.55	0.53	13.8
VA HOSPITAL	40.0	2	4000	0.55	0.48	27.6

TABLE VI

ABATEMENT PROGRAM FOR FEDERAL PROBLEM AREAS

IN THE

METROPOLITAN DAYTON INTRASTATE

AIR QUALITY CONTROL REGION

A. Statement of problem
B. Abatement measures proposed in five year plan*
C. Abatement measures accomplished or in progress

OHIO

GREENE

FAIRBORN

Wright-Patterson Air Force Base

(1) A. coal fired boilers in violation of Federal regulations
B. proposed conversion to oil or gas
C. funds requested for FY 1972

(2) A. incinerators without air pollution control equipment
B. proposed construction of new incinerators and modification of existing incinerators to meet current standards
C. funds requested for FY 1971

MONTGOMERY

DAYTON

Gentile Air Force Station

A. four coal fired boilers in violation of Federal regulations
B. no proposed abatement measures reported
C. no proposed abatement measures reported

OHIO (Continued)

MONTGOMERY

DAYTON

VA Hospital

(1) A. four coal fired boilers in violation of Federal regulations
B. proposed conversion to gas or oil
C. conversion proposals of 1968 not implemented

(2) A. single chamber pathological incinerator
B. proposed installation of a new incinerator
C. funds requested for FY 1971

MIAMISBURG

AEC Mound Laboratory

(1) A. four No. 6 oil fired boilers
B. proposed gas conversion
C. conversion proposals of 1968 not implemented

(2) A. open burning area
B. proposed construction of a multichamber incinerator
C. proposals of 1968 not implemented

*1967-72 plan per Executive Order 11282, superseded by Executive Order 11507

TABLE VII

POLLUTANT REDUCTION GOALS
(TONS/YEAR)

	SOX	NOX	CO	PART	HC
OHIO					
CLARK	---	---	---	----	--
DARKE	---	---	---	----	--
GREENE	1562	433	115	1058	37
MIAMI	---	---	---	----	--
MONTGOMERY	462	148	123	119	46
PREBLE	---	---	---	----	--
STATE TOTAL	2024	581	238	1177	83

NOTE: THESE REDUCTIONS WILL RESULT FROM ABATEMENT MEASURES PROPOSED, BUT NOT YET ACCOMPLISHED, IN THE FIVE-YEAR PLAN.

REFERENCES AND NOTES

1. Duprey, R.L., Compilation of Air Pollutant Emission Factors, Public Health Service Publication No. 999-AP-42, 1968.

   All calculated emissions are based on these factors.

2. Report of Consultation on the Metropolitan Dayton Intrastate Air Quality Control Region, Public Health Service September 1969.

   Data on emissions from all sources used to calculate percent government contribution were obtained from this report.

3. Clean Air Act, as amended (42 U.S.C. 1857 - 1857L) Sec 107, Sec 111. November 21, 1967.

4. Executive Order 11507, Prevention, Control, and Abatement of Air and Water Pollution at Federal Facilities, February 4, 1970.

5. Title 42 - Public Health, Chapter I, Subchapter F, Part 76, June 2, 1966.

6. Bureau of the Budget Circular A-78, May 18, 1970.

7. 1970 GSA Listing of Real Property owned by the Federal Government.